

CLAIMS

1. A vertical boat for heat treatment comprising a top plate, a bottom plate, and a column member fixed between the top plate and the bottom plate, a plurality of grooves being formed in the column member, and a supporting part for horizontally supporting a wafer-like body to be treated being formed between the grooves, wherein, as the column member, two or more column members, each of which has a circular arc-shaped cross section and has the supporting parts in the shape of circular arc formed integrally inside by formation of the grooves, are cylindrically disposed, and the wafer-like body to be treated is inserted from the grooves of the column members and supported along a circumferential part of a lower surface thereof by the respective circular arc-shaped supporting parts.

2. The vertical boat for heat treatment according to Claim 1, wherein, as the column member, two column members having the circular arc-shaped supporting parts each of which has a center angle of 60° to 170° are oppositely disposed.

3. The vertical boat for heat treatment

according to Claim 1, wherein, as the column member, three or more column members having the circular arc-shaped supporting parts each of which has a center angle of 20° to 100° are disposed.

4. The vertical boat for heat treatment according to any one of Claims 1 to 3, wherein the column members are provided with a vent at the same height as each of the grooves.

5. The vertical boat for heat treatment according to any one of Claims 1 to 4, wherein the vertical boat for heat treatment is for heat treatment of a silicon wafer.

6. The vertical boat for heat treatment according to any one of Claims 1 to 5, wherein an edge of a supporting surface of the supporting part is chamfered.

7. The vertical boat for heat treatment according to any one of Claims 1 to 6, wherein the supporting surface of the supporting part is downward sloped in the direction of the inside.

8. A method for producing a vertical boat for heat treatment which comprises a top plate, a

bottom plate, and a column member fixed between the top plate and the bottom plate, and is for horizontally supporting a wafer-like body to be treated, wherein the method comprises a step of manufacturing column members each of which has a circular arc-shaped cross section and has a larger outside radius and a smaller inside radius than a radius of the body to be treated, a step of cylindrically disposing two or more said column members between the top plate and the bottom plate to fix the column members, a step of forming grooves in each of the column members and at the same time forming circular arc-shaped supporting parts for supporting in the inside of thereof the body to be treated along a circumferential part of its lower surface.

9. A method for producing the vertical boat for heat treatment according to any one of Claims 1 to 7, wherein, the method comprises a step of cylindrically disposing two or more said column members having a circular arc-shaped cross section between the top plate and the bottom plate to fix the column members, a step of cutting the column members from the direction to insert the body to be treated thereby to form the grooves and at the same time to form the circular arc-shaped

supporting parts in the inside thereof, and a step of cutting the column members from the different direction at the same height thereby to pass it through.

10. A method for producing the vertical boat for heat treatment according to any one of Claims 1 to 7, wherein the method comprises a step of preparing column members each of which has a circular arc-shaped cross section and has a beam outside, a step of cylindrically disposing two or more said column members between the top plate and the bottom plate to fix the column members, and a step of, by using a circumferential blade which has a radius larger than an inside radius of the column members and smaller than an outside radius of a part to be said beam, cutting each of the column members from the direction to insert the body to be treated thereby to form the grooves, at the same time to form the circular arc-shaped supporting parts in the inside thereof, and further to pass through the other parts than the beam.